Machine Tool Software

For almost 20 years, a NASA-developed software package has played a part in the technical education of students who major in Mechanical Engineering Technology at William Rainey Harper College, Palatine, Illinois. Associate Professor William F. Hack has been using the APT (Automatically Programmed Tool) software since 1969 in his CAD/CAM (Computer Aided Design and Manufacturing) curriculum.

At right, Professor Hack (suited) is explaining to students how the APT software works in guiding machine tools. At lower right students are learning how to program computer guided machine tools that use APT software.

APT was designed specifically for computer aided manufacturing. The term APT denotes both the programming language and the computer software that processes the language.

Professor Hack teaches the use of APT programming languages for control of metal cutting machines. Machine tool instructions are geometry definitions written in the APT language to constitute a "part program." The part program is pro-

cessed by the machine tool. CAD/CAM students go from writing a program to cutting steel in the course of a semester. Harper College leases its APT package (150,000 source statements) from COSMIC, NASA's Computer Software Management and Information Center located at the University of Georgia (see page 140). ▲